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1. A method for tracing an electronic device having an agent
initiating communication and providing identifying indicia to a
host system, said electronic device connectable to said host system
through a global network, said method comprising the steps of:
[providing an Agent within the electronic device, the Agent
configured to transmit identifying indicia for the electronic
device and/or its device components to a host system at a
predetermined time without further intervention by the electronic
device or user upon activation;
activating the Agent;
at the predetermined time, the Agent establishing a
communication link between the electronic device and the host
system and transmitting the identifying indicia to the host system
without intervention by the electronic device or user;
enabling the host system to determine the location of the
electronic device based on tracing of the communication link]
automatically providing said host system with said identifying
indicia through said global network for determining the identity of
said electronic device; and
providing said host system with one or more of the global
network communication links used to enable transmission between
said electronic device and said host system, said communication
links used for determining the location of said electronic device.

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2. The method of claim 1 wherein said global network is the
~~Internet.~~

1 3. The method of claim 1 wherein said electronic device is
2 further connected to said host system through a telephone network,
3 and said method further comprising the steps of:
4 providing said identifying indicia to said host system through
5 said telephone network; and
6 determining the location of said electronic device by tracing the
7 source of said identifying indicia within said telephone network.

Ad
Cm
1 4. The method of claim 1 wherein said electronic device is
2 further connected to said host system through a cablevision
3 network, and said method further comprising the steps of:
4 providing said identifying indicia to said host system through
5 said cablevision network; and
6 determining the location of said electronic device by tracing the
7 source of said identifying indicia within said cablevision network.

1 5. The method of claim 1 wherein said electronic device is
2 further connected to said host system through a wireless radio
3 frequency network, and said method further comprising the steps of:
4 providing said identifying indicia to said host system through
5 said wireless radio frequency network; and
6 determining the location of said electronic device by tracing
7 the source of said identifying indicia within said wireless radio
8 frequency network.

1 6. The method of claim 1 wherein said electronic device is
2 further connected to said host system through a wireless microwave
3 network, and said method further comprising the steps of:
4 providing said identifying indicia to said host system through
5 said wireless microwave network; and

6 determining the location of said electronic device by tracing
7 the source of said identifying indicia within said wireless
8 microwave network.

1 7. The method of claim 3 wherein said step of providing said host
2 system with said identifying indicia through said global network,
3 and said step of providing said identifying indicia to said host
4 system through said telephone network occur at predetermined
5 intervals.

1 8. The method of claim 7 wherein said electronic device is lost
2 or stolen and said method further including the step of tracing
3 lost or stolen electronic devices.

1 9. The method of claim 2 wherein said step of providing said host
2 system with said one or more of the Internet communication links is
3 accomplished using a traceroute routine.

1 10. The method of claim 1 wherein said step of providing said host
2 system with said identifying indicia is accomplished by sending a
3 data packet including address information relating to the source of
4 the global network transmission.

1 11. The method of claim 2 wherein said step of providing said host
2 system with said identifying indicia is accomplished by sending a
3 domain name service query with said identifying indicia encoded
4 therein.

1 12. The method of claim 2 further including the step of providing
2 a list of lost or stolen electronic devices to said host system and
3 comparing said list of lost or stolen electronic devices with said

4 identifying indicia to determine if said electronic device is lost
5 or stolen.

1 13. The method of claim 12 wherein said host system sends a signal
2 through said Internet to said electronic device if it is determined
3 to be lost or stolen indicating that said lost or stolen electronic
4 device should initiate a traceroute routine.

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Cmp
1 14. The method of claim 12 wherein said host system sends a signal
2 through said Internet to said electronic device if it has been
3 determined to be lost or stolen indicating that said electronic
4 device should initiate a call to said host system via said
5 telephone network.

1 15. The method of claim 11 wherein said identifying indicia is
2 encoded within said domain name service query according to a
3 predetermined scheme.

1 16. The method of claim 15 wherein said host system decodes said
2 identifying indicia to determine the identity of said electronic
3 device.

CSB
1 17. The method of claim 1 wherein said electronic device is a
2 ~~computer having a hard drive.~~

1 18. The method of claim 17 further including the step of providing
2 said agent with deflection means to enable said agent to resist
3 disablement attempts and evade detection.

1 19. The method of claim 18 wherein said deflection means deflects
2 read and write attempts to the location where said agent is
3 disposed.

Sub C3
1 20. The method of claim 1 wherein said step of evading detection
2 is accomplished by providing an agent which is operable without
3 interfering with the normal operation of said electronic device.

ACM
1 21. The method of claim 17 wherein said step of loading said agent
2 within said computer is accomplished by loading said agent within
3 the boot sector of said hard drive.

1 22. The method of claim 17 wherein said step of loading said agent
2 within said computer is accomplished by loading said agent within
3 the partition sector of said hard drive.

1 23. The method of claim 17 wherein said step of loading said agent
2 within said computer is accomplished by loading said agent within
3 an operating system file on said hard drive.

1 24. The method of claim 23 wherein said operating system is MS-DOS
2 and said operating system file is IO.SYS.

1 25. The method of claim 23 wherein said operating system is PC-DOS
2 and said operating system file is IBMBIO.COM.

Sub C4
1 26. The method of claim 17 wherein said step of loading said agent
2 within said computer is accomplished by loading said agent on the
3 ~~ROM BIOS.~~

1 27. The method of claim 17 wherein said agent is a terminated and
2 stay resident program.

1 28. The method of claim 17 wherein said agent is a virtual device
2 driver program.

1 29. The method of claim 17 wherein said agent is an application
2 program.

1 30. The method of claim 17 wherein said agent is a file filter
2 program.

1 31. The method of claim 1 wherein said agent provides said
2 identifying indicia automatically and without user intervention.

1 32. The method of claim 31 wherein said step of providing said
2 host system with said identifying indicia occurs without causing
3 audible or visible signals to be emitted from said electronic
4 device.

1 33. The method of claim 2 wherein the communication link between
2 said electronic device and said host system is provided through a
3 link to a private network connection to the Internet.

1 34. The method of claim 2 wherein the communication link between
2 said electronic device and said host system is provided through a
3 telephone line connected to an Internet provider.

1 35. The method of claim 1 further comprising the step of assigning
2 said identifying indicia to said agent wherein said identifying
3 indicia comprises a unique electronic serial number, said

4 electronic serial number for enabling the determination of the
5 identity of said electronic device associated with said agent.

1 36. The method of claim 1 further comprising the step of loading
2 said agent within said electronic device for with said host system
3 such that said agent evades detection.

1 37. A method for monitoring an electronic device connectable to a
2 host system through a global network, said electronic device having
3 an agent, said agent providing identifying indicia for determining
4 the identity of said electronic device, said method comprising the
5 steps of:

6 loading said agent within said device such that said agent
7 evades detection; and

8 automatically providing said host system with said identifying
9 indicia through said network without causing audible or visual
10 signals to be emitted from said electronic device.

1 38. The method of claim 37 wherein said electronic device is
2 further connected to said host system through a telephone network,
3 and said method further includes the step of providing said
4 identifying indicia to said host system through said telephone
5 network.

1 39. The method of claim 37 wherein said step of providing said
2 identifying indicia occurs automatically and without human
3 intervention.

1 40. The method of claim 38 wherein said step of providing said
2 host system with said identifying indicia through said global
3 network, and said step of providing said identifying indicia to

4 said host system through said telephone network occur at
5 predetermined intervals.

1 41. The method of claim 36 wherein said global network is the
2 Internet and said step of providing said identifying indicia is
3 accomplished by encoding a domain name service query to include
4 said identifying indicia.

1 42. The method of claim 7 or 40 wherein said step of providing
2 said host system with said identifying indicia through said global
3 network, and said step of providing said identifying indicia to
4 said host system through said telephone network occur
5 ~~simultaneously.~~

1 43. The method of claim 1 wherein the Agent is encoded in one or
2 more forms, including software, firmware and hardware.

1 44. The method of claim 43 wherein the Agent is encoded in one or
2 more device components in the electronic device, including internal
3 non-volatile memory device, communication device, processor,
4 digital signal processor, integrated circuit and hardware circuit.

1 45. The method of claim 44 wherein the internal non-volatile
2 memory device includes one of ROM BIOS, ROM, EPROM, EEPROM and
3 Flash ROM.

1 46. The method of claim 44 wherein the communication device is a
2 modem.

1 47. The method of claim 46 wherein the Agent establishes
2 communication with the host system by using a command function

3 which initializes the communication and a call management function
4 which interfaces with the host system.

1 48. The method of claim 44 wherein the Agent establishes
2 communication with the host system independent of instructions from
3 the electronic device.

1 49. The method of claim 42 wherein the Agent is activated
2 independent of the computer's operating system.

1 50. The method of claim 42 wherein the Agent is activated prior to
2 loading the operating system.

1 51. The method of claim 49 wherein the Agent is activated by
2 loading into an internal volatile memory and running the Agent
3 prior to activating the operating system.

1 52. The method of claim 50 further comprising the steps of:
2 checking whether the Agent is also found on a hard disk within the
3 electronic device; and
4 copying the Agent to the hard disk prior to loading and running the
5 Agent.

1 53. The method of claim 44 wherein a first component of the Agent
2 is provided in a first device component and a second component of
3 the Agent is provided in a second device component.

1 54. The method of claim 53 wherein the first component of the
2 Agent includes a secure protocol component of the Agent which
3 communicates with the electronic device's operating system.

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1 55. The method of claim 54 wherein the Agent immediately
2 establishes the communication link with the host system to transmit
3 the identifying indicia of the electronic device if the secure
4 protocol component fails to establish communication with the
5 operating system.

1 56. The method of claim 53 wherein the second device component
2 includes a hard disk drive.

1 57. An apparatus within an electronic device including an agent
2 for initiating communication with a host monitoring system and
3 sending signals to a host monitoring system providing identifying
4 indicia comprising:
5 the identifying indicia includes location information; and
6 the host monitoring system is provided with telecommunication links
7 for determining the location of the electronic device based on
8 location information within the identifying indicia.

1 58. The apparatus of claim 57 wherein said electronic device is
2 further connected to said host monitoring system through a
3 cablevision network, and said apparatus further includes means for
4 providing said identifying indicia to said host monitoring system
5 through said cablevision network, and means for determining the
6 location of said electronic device by tracing the source of said
7 identifying indicia within said cablevision network.

1 59. The apparatus of claim 57 wherein said electronic device is
2 further connected to said host monitoring system through a wireless
3 radio frequency network, and said apparatus further includes means
4 for providing said identifying indicia to said host monitoring
5 system through said wireless radio frequency network, and means for

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6 determining the location of said electronic device by tracing the
7 source of said identifying indicia within said wireless radio
8 frequency network.

1 60. The apparatus of claim 57 wherein said electronic device is
2 further connected to said host monitoring system through a wireless
3 microwave network, and said apparatus further includes means for
4 providing said identifying indicia to said host monitoring system
5 through said wireless microwave network, and means for determining
6 the location of said electronic device by tracing the source of
7 said identifying indicia within said wireless microwave network.

1 61. The apparatus of claim 57 wherein said electronic device is a
2 computer having a hard drive.

1 62. The apparatus of claim 57 wherein said agent evades detection
2 by operating without interfering with the normal operation of said
3 electronic device.

1 63. The apparatus of claim 57 wherein said means for providing
2 said host monitoring system with said identifying indicia operates
3 automatically and without user intervention.

1 64. The apparatus of claim 62 wherein said means for providing
2 said host monitoring system with said identifying indicia for said
3 electronic device occurs without causing audible or visible signals
4 to be emitted from said electronic device.

1 65. The apparatus of claim 57 wherein said global network is the
2 ~~Internet.~~

1 66. The apparatus of claim 65 wherein said agent is provided with
2 deflection means for evading detection and resisting disablement.

1 67. The apparatus of claim 66 wherein said deflection means
2 deflect read and write attempts to the location on said hard drive
3 where said agent is disposed.

1 68. The apparatus of claim 65 wherein said identifying indicia is
2 encoded within a domain name service query.

1 69. The apparatus of claim 68 wherein said host monitoring system
2 includes means for decoding said identifying indicia to determine
3 the identity of said electronic device.

1 70. The apparatus of claim 65 wherein said means for providing
2 said host monitoring system with said one or more global network
3 communication links is accomplished using a traceroute routine.

1 71. The apparatus of claim 65 wherein said Internet connection
2 between said electronic device and said host monitoring system is
3 provided through a link to a private network connection to the
4 Internet.

1 72. The apparatus of claim 69 wherein said link to a private
2 network connection to the Internet is a wireless link.

1 73. The apparatus of claim 65 wherein said Internet connection
2 between said electronic device and said host monitoring system is
3 provided through a telephone line connected to an Internet
4 provider.

1 74. The apparatus of claim 65 further including means for
2 assigning said identifying indicia to said agent wherein said
3 identifying indicia comprises a unique electronic serial number,
4 said electronic serial number for enabling the determination of the
5 identity of said electronic device associated with said agent.

1 75. The apparatus of claim 57 wherein said electronic device is
2 further connected to said host monitoring system through a
3 telephone network, and said apparatus further includes means for
4 providing said identifying indicia to said host monitoring system
5 through said telephone network, and means for determining the
6 location of said electronic device by tracing the source of said
7 identifying indicia within said telephone network.

1 76. The apparatus of claim 75 wherein said means for providing
2 said host monitoring system with said identifying indicia through
3 said global network, and said means for providing said identifying
4 indicia to said host monitoring system through said telephone
5 network operate at predetermined intervals.

1 77. The apparatus of claim 75 wherein said electronic device is
2 lost or stolen.

1 78. The apparatus of claim 75 further including means for
2 providing a list of lost or stolen electronic devices to said host
3 monitoring system and means for comparing said list of lost or
4 stolen electronic devices with said identifying indicia to
5 determine if said electronic device is lost or stolen.

1 79. The apparatus of claim 78 wherein said host monitoring system
2 includes means for sending a signal through the Internet to said

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3 electronic device if it is determined to be lost or stolen,
4 indicating that said lost or stolen electronic device should
5 initiate said traceroute routine.

1 80. The apparatus of claim 78 wherein said host monitoring system
2 includes means for sending a signal through the Internet to said
3 electronic device if it is determined to be lost or stolen
4 indicating that said lost or stolen electronic device should
5 initiate a call to said host monitoring system through said
6 telephone network.

1 81. The apparatus of claim 57 wherein the Agent is encoded in one
2 or more forms, including software, firmware and hardware.

1 82. The apparatus of claim 81 wherein the Agent is encoded in one
2 or more device components in the electronic device, including
3 internal non-volatile memory device, communication device,
4 processor, digital signal processor, integrated circuit and
5 hardware circuit.

1 83. The apparatus of claim 82 wherein the internal non-volatile
2 memory device includes one of ROM BIOS, ROM, EPROM, EEPROM and
3 Flash ROM.

1 84. The apparatus of claim 83 wherein the communication device is
2 a modem.

1 85. The apparatus of claim 84 wherein the Agent comprises a
2 command function which initializes communication with the host
3 system and a call management function which interfaces with the
4 host system.

Sub B3
1 86. The apparatus of claim 82 wherein the Agent is configured to
2 establish communication with the host system independent of
3 instructions from the electronic device.

1 87. The apparatus of claim 83 wherein the Agent is configured to
2 be activated independent of the computer's operating system.

1 88. The apparatus of claim 87 wherein the Agent is configured to
2 be activated prior to loading the operating system.

1 89. The apparatus of claim 87 wherein the Agent is configured to
2 be loaded into an internal volatile memory and executed prior to
3 ~~activating the operating system.~~

1 90. The apparatus of claim 88 wherein the Agent is further
2 configured to check whether the Agent is also found on a hard disk
3 within the electronic device and copying the Agent to the hard disk
4 prior to loading and running the Agent.

1 91. The apparatus of claim 82 wherein a first component of the
2 Agent is provided in a first device component and a second
3 component of the Agent is provided in a second device component.

1 92. The apparatus of claim 91 wherein the first component of the
2 Agent includes a secure protocol component of the Agent which
3 communicates with the electronic device's operating system.

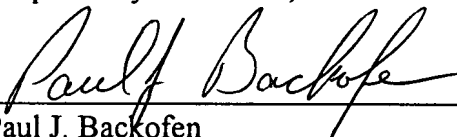
1 93. The apparatus of claim 92 wherein the Agent is configured to
2 immediately establish the communication link with the host system
3 to transmit the identifying indicia of the electronic device if the

4 secure protocol component fails to establish communication with the
5 operating system.

94. The apparatus of claim 91 wherein the second internal
2 memory device is a hard disk drive.

Serial No.; 09/047,030

Respectfully Submitted,



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